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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/674,478

10/01/2003

Shibly S. Ahmed

H1487

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10/04/2004

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EXAMINER

BERRY, RENEE R

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,478

Applicant(s)

AHMED ET AL.

Examiner

Renee R Berry

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 0729.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/01/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I in the reply filed on July 29, 2004 is acknowledged.

Claims 9-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 29, 2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,764,884 to Yu et al.

In regards to claim 1, Yu teaches a semiconductor device, comprising: a substrate; an insulating layer formed on the substrate; a fin formed on the insulating layer; silicided source and drain regions formed adjacent the fin; and a metal gate

formed over a portion of the fin at column 7, lines 62-67 to column 8, lines 1-21 and lines 37-40.

In regards to claim 2, Yu teaches the semiconductor device of claim 1 wherein fin includes silicon at column 7, lines 65-66.

In regards to claim 3, Yu teaches the semiconductor device of claim 1, wherein the metal gate includes tantalum or titanium at column 10, lines 17-18.

In regards to claim 4, Yu teaches the semiconductor device of claim 1, further comprising: at least one dielectric layer formed between the fin and the metal gate at column 10, lines 6-7.

In regards to claim 5, Yu teaches the semiconductor device of claim 1, wherein the silicided source and drain regions of the fin are fully silicided down to the insulating layer at column 8, lines 37-40.

In regards to claim 6, Yu teaches the semiconductor device of claim 5, wherein the silicided source and drain regions have a thickness ranging from about 400 Å to about 1500 Å at column 4, lines 30-34.

In regards to claim 7, Yu teaches the semiconductor device of claim 1, further comprising: a pair of spacers formed over portions of the fin and on opposite sides of the metal gate at column 8, lines 22-25.

In regards to claim 8, Yu teaches the semiconductor device of claim 7, wherein the portions of the fin under the pair of spacers separate a channel region of the fin from the silicided source and drain regions at column 8, lines 37-40.

In regards to claim 16, Yu teaches a semiconductor device, comprising: a substrate; an insulating layer formed on the substrate; a fin formed on the insulating layer; a dielectric layer formed on the fin; a metal gate formed over a portion of the fin and the dielectric layer; a pair of spacers formed on the fin on opposite sides of the metal gate; and silicided source and drain regions formed on the opposite sides of the metal gate at column 7, lines 62-67 to column 8, lines 1-21 and lines 37-40.

In regards to claim 17, Yu teaches the semiconductor device of claim 16, wherein the metal gate includes tantalum or titanium at column 10, lines 17-19.

In regards to claim 18, Yu teaches the semiconductor device of claim 16, wherein the silicided source and drain regions are composed of silicide down to the insulating layer at column 8, lines 37-40.

In regards to claim 19, Yu teaches the semiconductor device of claim 16, wherein the metal gate and the wherein the silicided source and drain regions comprise a silicide material down pair of spacers are located over a channel region of the fin, and to the insulating layer at column 8, lines 22-24.

In regards to claim 20, Yu teaches the semiconductor device of claim 19, wherein a thickness of silicided source and drain regions ranges from about 400 Angstroms to about 1500 Angstroms at column 4, lines 30-34.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. discloses

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renee R Berry whose telephone number is (571) 272-1774. The examiner can normally be reached on M-F 9-5:30.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RRB

September 25, 2004


David Neims
Supervisory Patent Examiner
Technology Center 2800